

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

MOOG INC.,

Plaintiff,

v.

Case No.: _____

SKYRYSE, INC., ROBERT ALIN
PILKINGTON, MISOOK KIM, and DOES NOS.
1-50,

Defendants.

DECLARATION OF TODD SCHMIDT

TODD SCHMIDT, under penalty of perjury and pursuant to 28 U.S.C. § 1746,
declares the following to be true and correct:

I. Background

1. My name is Todd Schmidt. I provide this declaration in support of Moog Inc.'s Motion for a Temporary Restraining Order/Preliminary Injunction. I am over the age of 18 years old. I have personal knowledge of the matters set forth herein and if called as a witness, I could and would competently testify as to all facts set forth herein.

2. I graduated from the University of Phoenix with a B.S. and Information Technology in Software Engineering.

3. I have worked at Moog Inc. ("Moog") since 1999, where I started as a paid intern. From 2006 through 2017, I served as a Senior Software Engineer/Software Team Lead. From 2017 through 2019, I served as Software Engineering Manager. From 2019 to present, I served as Chief Software Engineer and more recently Principal Engineer. I lived in Utah and worked

out of Moog's Salt Lake City offices until 2014 and I have lived in New York and worked out of Moog's New York offices since 2014.

4. My duties as Chief Software Engineer include serving as lead of the Software Engineering Process Group, providing technical oversight of all software development and verification activities, providing oversight of product safety and integrity, providing technical authorization of designs, providing oversight for research and development initiatives, and providing mentorship to engineering staff. Throughout my tenure at Moog, I have worked on the development of Moog's flight control software and related project-specific applications.

II. Platform Software

5. Moog's base flight control software is called the software executive. It is this software that hosts aircraft specific flight control applications and provides the core operating environment and an abstraction layer to the hardware (i.e. interface and driver software). This software is in essence the "operating system" that an aircraft's computer uses, similar to Windows or Mac OS for a standard home computer. On top of the base operating system, applications specific to the particular aircraft involved are built and sit on top of this base operating system to tailor its functionality to the particular aircraft. This is akin to downloading a program or application and running it on a Windows or Mac OS operating system on a standard computer. The particular application provides a specific use, but the underlying operating system allows the entire system and machine to work. Over the past 15 years, Moog has developed three major branches of the executive software base flight control operating system software: one for commercial aircrafts (called "Platform"), one for military use (called "eRTOS"), and one for both commercial and military motor control applications (called "AMP").

6. Platform is the generic name for the first iteration used on most commercial programs. Platform is being used in many widespread and common commercial airplanes today, including aircrafts such as 747, G280, G650, and C919. [REDACTED]

[REDACTED] I was involved in the development and construction of the Platform base software for commercial programs. I have held management and/or technical oversight positions for the creation of the Platform, eRTOS, and AMP as well as the many different project-specific applications using these executive software packages.

7. The base executive software allows Moog to tailor its aircraft-specific software very quickly based on the particular needs of that aircraft or project. The core software is re-used from program to program and provides the base operating environment software such that Moog only needs to develop an additional layer of software for the flight controls of a particular type of aircraft.

8. Based on my personal involvement with and familiarity of the Platform base software, [REDACTED]

These estimates do not include the amount of time or money used to develop the project-specific applications that sit on top of these packages.

III. Communications With Gonzalo Rey

9. On October 13, 2021, Gonzalo Rey (former Chief Technology Officer at Moog) reached out to me via text message to see if I had interest in joining Skyryse. I had known Mr. Rey for several years given our working relationship when he was a Moog employee. We spoke on the phone the following day. During the phone call, Mr. Rey walked me through what Skyryse was doing, plans for where they wanted to go, and advised me that he would like me to join Skyryse.

10. Specifically, Mr. Rey advised me that Skyryse was primarily working on making an iPad type interface for flying vehicles, particularly helicopters. He told me that the goal was extracting pilot interfacing functions to an iPad type of interface, the goal being that anyone who can use an iPad can fly a helicopter without the large amounts of pilot training. Mr. Rey also told me that Skyryse wanted to provide an entire system that could fly an aircraft, including software, actuator functions, flight controls, computer hardware, etc. Mr. Rey communicated that Skyryse's grand vision was taking that simplified iPad type of interface to any aircraft—therefore, at some point in the future, any lay person could fly any aircraft using that simplified interface. Mr. Rey told me Skyryse's goal was to have a functional product released to the public “within a couple years” and that Skyryse had big investors coming on board to help fund the company's goals. Mr. Rey made it clear to me that Skyryse was pursuing all flight control components—software, hardware, and actuation. Thus, it was evident to me that Skyryse was trying to re-produce the types of products that Moog had been developing over the past 20 years.

11. In connection with the potential opportunity to join Skyryse, Mr. Rey advised that he was looking for an approximate four year commitment from me. He advised me that he

needed me and others to navigate “technical challenges” at Skyryse and to help with Federal Aviation Administration (“FAA”) certification challenges. Mr. Rey told me he wanted me to lead Skyryse’s system engineering team. While Mr. Rey did not make a specific monetary offer to me, he said something to the effect of: “You would become very wealthy.” At the conclusion of our telephone conversation, I told Mr. Rey I would consider and get back to him.

12. On October 22, 2021, I texted Mr. Rey and advised him that I was not interested in joining Skyryse for various reasons. Mr. Rey replied and asked if I was interested in working remotely from my current location in New York and described other scenarios where Skyryse allowed its staff to work remotely full time. Ultimately, I confirmed to Mr. Rey that I was not interested in joining Skyryse. We had no further communications after this.

13. In evaluating Skyryse’s business and potential employment there, I did not think Mr. Rey’s plans for Skyryse in terms of its timetable for technology development were viable. I did not think Skyryse could feasibly develop the automated flight technology or base operating systems within the next few years as Mr. Rey had predicted. One reason is that there are substantial testing, certification, and training requirements imposed by the FAA before any software or other aircraft component is approved for public use. I did not find it realistic that abstracting an entire flight control system down to an iPad type of interface was realistic or would be approved by the FAA at any time in the next 5-10 years.

14. Further, in order to satisfy the rigorous certification requirements, there must be adequate technology to support the system, software, and hardware components. Skyryse, being a relatively new startup company that had only recently pivoted into automated flight technology, did not have the track record of proven software or hardware in this industry. In order to build automated flight control systems, Skyryse would have to hire a large number of

engineers, and a massive amount of software would need to be written and tested over a period of many years.

15. Having been personally involved in building, testing, and certifying this type of system software, I know first-hand the immense scale of investment needed for flight control systems. Moog's flight control systems for a commercial aircraft (including software, hardware, actuation, hydraulics, etc.) typically cost between \$50-250 million for each type of aircraft, and in turn can consume hundreds of thousands to over one million hours of engineering and support staff time. These are substantial investments and projects that I did not feel Skyrise, as a start-up, could execute in a timely manner. In addition to the sheer scale of investment and manpower, tremendous experience in the flight control industry is required to develop architecture that is safe, reliable, and would satisfy the rigorous demands of the certification authorities around the world.

IV. Data Theft

16. It is my understanding that in late January 2022, the Moog IT department was asked to investigate whether individuals who had left Moog for Skyrise, or were soon leaving Moog to join Skyrise, had taken or copied any Moog data before their departure.

17. It is my understanding that Moog's security investigation revealed that Moog employee Misook Kim had copied certain Moog data to an external hard drive. It is my understanding based on my personal investigation, communications with the Moog IT and security teams, and review of Moog's internal business records, that Ms. Kim's copying of Moog Data was performed on November 19, 2021, less than one month before her last day at Moog.

18. I have personally reviewed the file log for the data copied by Ms. Kim (the "File Log") and have investigated its contents. The file log was provided by the Moog IT department after investigating the external hard drive that Ms. Kim used to copy the data from Moog's

software database. A true and correct copy of the File Log is attached as Exhibit A to the concurrently filed Declaration of Ian Bagnald.

19. I, along with my colleague Michael Hunter, have analyzed the File Log in detail. The total amount of files copied by Ms. Kim is 136,994. The overall file metrics are broken down as follows:

Type	Number
Source Code	43,960
Spreadsheets	5,377
Documents	2,831
Executables	954
Images	9,003
MAP Files	2,010
Models	7,898
Object Files	1,026
Plain Text	4,613
Presentations	404
Misc.	20,655
SVN Logs	38,263

Total Files	136,994
-------------	---------

20. My review of the File Log shows that the following program classifications were found (showing which program data had been copied by Ms. Kim):



21. My review of the File Log confirmed that the entire application layer for Platform was copied by Ms. Kim, meaning that 100% of the base Platform software and its code were copied for at least two microprocessor operating environments. All three iterations (Platform, eRTOS, AMP) of the executive software were copied, as well as portions of test artifacts related to the iterations. The types of files copied by Ms. Kim for executive software and other software programs and applications include the following types of data:

- Document: Files of type .pdf or .doc(x)
- Executable: Files of type .exe or .hex, software executable files including flight programs used on aircraft
- Image: Files of type .png, .jpg, .jpeg, .bmp
- MAP: Files that contain variables and addressing of flight code

- Misc: Files with no specific type. Most of these files are auto-generated by the various tools we use and do not contain specific data
- Model: Files that contain pictures or models of functionality. These would include Visio diagrams, Matlab files (including Simulink), hand drawn figures
- Object: Files created from a compiler containing executable object code. Usually used to link together a flight program.
- Text: Plain or rich text files (.txt or .rtf)
- Presentation: Files of type .ppt(x)
- Spreadsheet: Files of type .xls(x)
- Source Code: Files containing source code (.py, .c, .cpp, .h, .cov, .html, .bat, .asm, .pl, .log, .xml, .chm)
- SVN Log: Files that are autogenerated by Moog's Subversion network (SVN) with cryptic names, contain a copy of a file being retrieved from the SVN repository

22. In addition to the executive base software, the data and code for several project-specific applications were also copied, as reflected above. This includes several military programs. The data copied by Ms. Kim includes all the code, documentation, and related information regarding the composition, testing, and certification of both the executive software packages and project-specific applications in some instances.

23. My investigation of the File Log shows that, for a large portion of the files copied, Ms. Kim used the SVN repository path named for another former Moog employee, Robert Alin Pilkington, to copy the data onto the external hard drive. The file path used by Ms. Kim was: "D:\Misook\ENG_Alin_Branch\Software..." Therefore, the file path shows that Ms. Kim went into Mr. Pilkington's SVN named branch and copied everything that Mr. Pilkington worked on or had access to.

24. I had technical oversight for a portion of items Mr. Pilkington worked on for several years before his departure from Moog. Based on my firsthand knowledge working with Mr. Pilkington for several years, my perception is that Mr. Pilkington had a difficult time taking direction from anyone, me included. My perception was that Mr. Pilkington was only interested

in what he wanted to do, regardless of what other team members or superiors were doing or had asked him to do.

25. I also had technical oversight for a portion of items Ms. Kim worked on for several years before her departure from Moog. Based on my firsthand knowledge working with Ms. Kim for several years, my perception is that she was not at the same technical skill level as her peers. My perception was that she was very loyal and obedient to Mr. Pilkington and did whatever he needed or asked for.

V. Irreparable Harm

26. The data copied by Ms. Kim, and possession thereof by Skyrise, presents substantial and irreparable harm to Moog.

27. The scope of data copied by Ms. Kim is difficult to comprehend. She essentially copied almost everything that Moog's flight control system software engineering teams had worked on over the past 15 years. Everything that Ms. Kim and Mr. Pilkington had worked on was included in this data. Ms. Kim copied executive package source code, application layer source code, program-specific models, software and system test cases, automated tools, requirements, designs, and other project related information. It is impossible to quantify the amount of monetary investment, engineering hours, and other resources that have gone into developing, testing, and certifying all of these projects and applications. This information is truly priceless and represents the highest level of intelligence and wisdom of Moog's smartest architects of the past 15-20 years. It is from this and similar technology that Moog generates \$1 billion annually in revenue.

28. One of the notable programs copied by Ms. Kim is the commercial program G280. I personally worked on this project and helped design, test, and certify it. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Based on my personal research as well as review of Moog's internal business records regarding its prior business history and relationship with Skyryse, I understand that Skyryse is now pursuing flight control systems for helicopters and fixed-wing aircraft (and others). The data from the G280 project is directly related to what Skyryse is pursuing and, based on my experience and knowledge of this project, would be extremely valuable to Skyryse and would save it tremendous time, money, effort, and resources in having to architect and design these programs from scratch.

29. These software programs and applications based in the files copied were developed over the past 15 years. [REDACTED]

[REDACTED]

[REDACTED]

30. Part of what makes Moog unique and competitive in the marketplace is that it can design entire systems for aircraft flight controls (i.e., software, electrical hardware, and mechanical hardware) and integrate all aspects together in-house. Most other competitors can only do one or the other. Moog builds software and hardware systems safely through the use of architectural diagrams. Ms. Kim copied all of Moog's architectural diagrams for 8-9 project specific applications. This information in the hands of Skyryse removes a large barrier to entry and saves Skyryse tens of millions of dollars and several years of work and represents a vast amount of experience learned by Moog engineers.

31. At the time of her departure in December 2021, Ms. Kim was working solely on a military program called Sensitive Government Program 2. She was specifically working on the verification and testing of the software. Thus, even if Ms. Kim wanted to copy certain Moog data for legitimate business purposes, she would only have a need to copy certain verification and testing data related to Sensitive Government Program 2. Based on my review of the File Log, Ms. Kim would have needed, at most, to access 0.5% of the total data that she copied on November 19, 2021.

32. Even so, there would be no need or reason to copy Moog's data to an external hard drive, even if for legitimate business purposes. Ms. Kim had her own Moog-issued computer. Even if Ms. Kim was working on a different Moog computer, she could easily access all the same data she copied directly from Moog's Subversion network using her login credentials. I cannot think of any legitimate business purpose why Ms. Kim copied data to an external hard drive, let alone the gargantuan volume and scope of data that she copied. Throughout my 22-year tenure at Moog, I am not aware of any other instance where a Moog employee copied to an external hard drive even a fraction of the data that Ms. Kim did across many different programs at the same time.

I declare that the foregoing is true and correct under penalty of perjury under the laws of the United States of America.

Dated: February 28, 2022



Todd Schmidt